

DaimlerChrysler AG

Patent claims

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1. A driver restraining system in a motor vehicle, having an airbag (10) which is integrated into a steering device (4), wherein in the event of a crash the positioning of the steering device (4) and a
10 triggering decision about the unfolding of the airbag (10) and an unfolding characteristic of the airbag (10) are determined by a control unit (25) whose input signals comprise a signal of a crash detection sensor system (27) and a signal of a passenger compartment
15 sensor system (30) which has at least one seat position detection means (28) and a sensor system (31, 32, 33, 34) for sensing morphological data of the driver (2), and wherein in the event of a crash the control unit (25) additionally actuates a
20 motor-operated seat adjustment device (20) of the driver's seat (3) in an adapted fashion.

2. The driver restraining system as claimed in claim 1, characterized in that the sensor system for
25 sensing morphological data of the driver (2) has at least one weight sensor (33, 34) which is integrated into the driver's seat (3) and which is preferably a component of a seat occupation detection means.

30 3. The driver restraining system as claimed in claim 1 or 2, characterized in that the sensor system for sensing morphological data of the driver (2) has at least one sensor (32) which determines the size of the driver (2) and which preferably senses a position of
35 the head (2A) of the driver (2).

4. The driver restraining system as claimed in claim 3, characterized in that the sensor (32) for

determining the position of the head (2A) of the driver (2) is arranged in the region of the inner roof lining (35) of a vehicle or of a headrest (15), the sensor (32) being preferably embodied as a capacitive sensor.

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5. The driver restraining system as claimed in one of claims 1 to 4, characterized in that in the event of a crash the motor-operated seat adjustment device (20) sets a vertical composition and axial position of seat elements (13, 14, 15), in particular of a seat lower part (13), a backrest (14) and a headrest (15) as a function of signals of the control unit (25).

6. The driver restraining system as claimed in one of claims 1 to 5, characterized in that the passenger compartment sensor system (30) has a sensor (31) for sensing the distance (D1) of the driver (2) from a steering wheel (5) of the steering device (4).

7. The driver restraining system as claimed in claim 6, characterized in that the sensor (31) for sensing the distance (D1) of the driver (2) from the steering wheel (5) is arranged on an exit flap (11) of the airbag (10).

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8. The driver restraining system as claimed in claim 6 or 7, characterized in that the sensor (31) for sensing the distance (D1) of the driver (2) from the steering wheel (5) is embodied as a capacitive sensor.

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9. The driver restraining system as claimed in one of claims 1 to 8, characterized in that in the event of a crash the control unit (25) additionally actuates a belt pretensioning device (26) in an adapted fashion.